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AgriLIFE EXTENSION
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Perennial Weed Control During Fallow Periods in the Texas High Plains

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Perennial weeds are plants that grow back each year from old roots or rhizomes. These roots and rhizomes have numerous buds that may develop into new shoots and increase infestations.

Successful long-term control of perennial weeds must include a three-phase program. The three phases include prevention, seedling control and established plant control.

Weed prevention consists of cultural practices to prevent the establishment of perennial weeds. It is impossible to reclaim infested fields from perennial weeds if weeds are continuously reinvading clean croplands. Weed prevention includes control in surrounding noncrop areas, such as fence rows, playa lake beds, turn rows, and ditches. Every effort should be made to control small infested areas in a field. Spot treatments are generally much more effective and economical than trying to control perennial weeds over large areas. Planting weed-free crop seed and making sure tillage and harvesting equipment is free of weed seed and root segments are essential. Gin trash and feedlot manure are also potential sources of perennial weed seed.

Seedling control, or the control of weeds germinating from seeds, is much easier to accomplish than the control of weeds originating from old roots. Most perennial weeds also produce seed; however, seed may or may not be viable. Several chemicals, including Roundup; MSMA; 2,4-D; Banvel; and Paraquat, as well as timely cultivation, usually control seedlings at a moderate cost. Seedlings can quickly develop buds and become perennial they are if not controlled early. Therefore, every effort should be made to control young seedlings before they become mature, established plants.

Once perennial plants become established, diligence is required for effective control. Repeated chemical treatments or mechanical tillage are often needed to kill established plants and roots. The effectiveness of herbicides to control perennial weeds is dependent on the herbicide being absorbed and transported throughout the plant. Post-emergence herbicides are better absorbed and translocated in actively growing plants than in plants that are stressed by drought, heat, or mechanical injury. Best results are often obtained if rhizomes and stolons are cut up by tillage practices in order to maximize emergence of plants prior to herbicide application. Once an herbicide has been applied, the plants should not be disturbed by tillage for at least 7 days to provide adequate time for the herbicide to be effective.

Pre-emergence herbicides are not dependent on plant growing conditions at the time of application. However, enough rain or irrigation must follow application to incorporate the herbicide into the soil. Generally 1/3 to 1 inch of water is necessary for proper incorporation, depending upon the soil type. If adequate moisture has not been received within 10 days of application, the herbicide should be mechanically incorporated approximately 2 inches in the soil. If plants have emerged prior to herbicide application or incorporation, the herbicide label must be examined to determine if the herbicide has post-emergence activity. If not, emerged plants will need to be destroyed by tillage or with a post-emergence herbicide.

The following table lists herbicide options that should be considered for perennial weed control during fallow periods in the Texas Panhandle.

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Control Program for Perennial Weeds During Fallow Periods in the Texas High Plains

Weed	Herbicide	Rate/Acre	Expected Control After 1 Year	Comments	Spot Treatment
Johnsongrass	Roundup	2 - 3 qt.	Good	For best results apply when plant has reached the boot to head stage of growth. Apply with 1 pint nonionic surfactant per 25 gallons of water. Roundup works best when applied in 3 to 10 gallons of water per acre. Four pounds of ammonium sulfate per 25 gallons of water will increase control on stressed johnsongrass.	For handgun spraying add 1.3 ounces Roundup and 1.3 ounces nonionic surfactant for every gallon of water.
	Fusilade 2000	1.5 - 2.0 pt.	Good	Apply when johnsongrass is 12 to 18 inches. If regrowth occurs, make a second application. Apply with 1/2 to 1 pint of nonionic surfactant or 1 to 2 pints crop oil per 25 gallons of water. Seventeen pounds of ammonium sulfate per 100 gallons of water will increase control on stressed johnsongrass.	For handgun spraying add 1.5 ounces of Fusilade and 0.5 ounces nonionic surfactant or 1.5 ounces crop oil for every gallon of water.
	Poast	1.5 pt.	Fair	Apply when johnsongrass is 15 to 20 inches. If regrowth occurs, make a second application. Two pints of Dash or crop oil per acre should be added to the mix. Seventeen pounds of ammonium sulfate per 100 gallons of water will increase control on stressed johnsongrass.	For handgun spraying add 1.25 ounces Poast and 1.25 ounces crop oil or Dash for every gallon of water.
	Poast Plus	2.0 pt.	Fair	Apply when johnsongrass is 15 to 20 inches. If regrowth occurs, make a second application. Two pints of Dash or crop oil per acre should be applied to the mix.	For handgun spraying add 2.0 ounces Poast and 1.25 ounces crop oil or Dash for every gallon of water.
	Assure II	12 oz.	Good	Apply when johnsongrass is 10 to 16 inches. If regrowth occurs, make a second application. Apply with 2 pints of crop oil or 0.5 pint of nonionic surfactant per 25 gallons of water. 120-day crop rotation restriction.	For handgun spraying add 1 ounce Assure II and 1.3 ounces crop oil or 0.3 ounce nonionic surfactant for every gallon of water.

Weed	Herbicide	Rate/Acre	Expected Control After 1 Year	Comments	Spot Treatment
Johnsongrass (continued)	Select	0.5 - 1.0 pt.	Good	Apply when johnsongrass is 6 to 10 inches. If regrowth occurs, make a second application. Apply with 2 pints of crop oil per acre.	For handgun spraying add 0.65 ounce Select and 1.25 ounces crop oil for every gallon of water.
	Arsenal	2 - 3 pt.	Good	**For use on noncropland only**. Soil sterilant. Apply post-emergence.	For handgun spraying add 0.66 ounce Arsenal plus 0.5 ounce nonionic surfactant for every gallon of water
Woollyleaf Bursage (lakeweed)	Banvel	1 - 2 qt.	Fair	Recropping to wheat may be a problem if Banvel is applied in the late summer. Delay planting for 45 days per pint of Banvel applied per acre.	For handgun spraying mix 1.3 ounces Banvel for every gallon of water.
	Tordon 22K Tordon 22K + 2,4-D LV4	1 - 2 pt. 0.5 - 1.0 pt. + 2 pt.	Good	**For use on noncropland only or land to be planted to a small grain the following year**. Soil sterilant. For best results, treat when weeds are actively growing in the spring prior to bloom or late summer.	For handgun spraying mix 1.25 ounces Tordon for every gallon of water.
	Arsenal	2 - 3 pt.	Excellent	**For use on noncropland only**. Soil sterilant. For best results apply post-emergence.	For handgun spraying add 0.66 ounce Arsenal plus 0.5 ounce nonionic surfactant for every gallon of water.
Texas Blueweed	Banvel	1 - 2 qt.	Good	Recropping to wheat may be a problem if Banvel is applied in the late summer. Delay planting for 45 days per pint applied per acre.	For handgun spraying add 1.3 ounces Banvel for every gallon of water.
	2,4-D LV4	2 pt.	Fair	**Currently not labeled**; however, TAES research has shown good control of Texas blueweed with 2,4-D LV. Use only if labeled weeds such as bindweed are present.	Generally not applied with a handgun.
	Landmaster BW	54 oz.	Fair	**Currently not labeled**; however, TAES research has shown good control of Texas blueweed with Landmaster BW. Use only if labeled weeds such as bindweed are present.	For handgun spraying add 1.3 ounces Landmaster BW per gallon of water.

Weed	Herbicide	Rate/Acre	Expected Control After 1 Year	Comments	Spot Treatment
Texas Blueweed (continued)	Tordon 22K Tordon 22K + 2,4-D LV4	1 - 2 pt. 0.5 - 1.0 pt. + 2 pt.	Good	**For use on noncropland only or land to be planted to a small grain the following year.** Soil sterilant. For best results treat when weeds are actively growing in the spring prior to bloom or late summer.	For handgun spraying mix 1.25 ounces Tordon for every gallon of water.
	Arsenal	1 qt.	Good	**For use on noncropland only.** Soil sterilant. **Currently not labeled**; however, TAES research has shown good control of Texas blueweed with Arsenal. Use only if labeled weeds such as bindweed are present.	For handgun spraying add 0.66 ounce Arsenal plus 0.5 ounce nonionic surfactant for every gallon of water.
Silverleaf Nightshade (whiteweed)	Roundup	2 qt.	Good	For best results, apply when nightshade has reached berry stage. Apply with 1 pint of nonionic surfactant per 25 gallons of water. For best results, apply in 3 to 10 gallons of water per acre.	For handgun spraying add 1.3 ounces Roundup plus 1.3 ounces nonionic surfactant for every gallon of water.
	Banvel	2 qt.	Fair	For best results, apply when nightshade has reached berry stage. Recropping to wheat may be a problem if Banvel is applied in the late summer. Delay planting for 45 days per pint of Banvel applied per acre.	For handgun spraying add 1.3 ounces Banvel for every gallon of water.
	Arsenal	2 qt.	Good	**For use on noncropland only.** Soil sterilant. **Currently not labeled**; however, TAES research has shown good control of Texas blueweed with Arsenal. Use only if labeled weeds such as bindweed are present.	For handgun spraying add 0.66 ounce Arsenal plus 0.5 ounce nonionic surfactant for every gallon of water.
Field Bindweed See publication L-2339, "Field Bindweed Control in the Texas High Plains" for further information.	Banvel 2,4-D LV4	1 - 2 qt. 1 - 2 qt.	Good Fair	For best results with Banvel, apply to 6- to 10-inch bindweed in September or October. To prevent wheat injury, the interval between application and planting should be 45 days per pint of Banvel applied.	For handgun spraying add 1.3 ounces of Banvel for every gallon of water.

Weed	Herbicide	Rate/Acre	Expected Control After 1 Year	Comments	Spot Treatment
Field Bindweed (continued)	Banvel + Tordon 22K 2,4-D + Tordon 22K Tordon 22K	0.5 - 1.0 pt. + 0.5 - 1.0 pt. 1 - 2 pt. + 0.5 - 1.0 pt. 1 - 2 pt.	Good Good Good	**For use on noncropland only or land to be planted to a small grain the following year**. For best results, apply to actively growing bindweed.	For handgun spraying mix 1.25 ounces Tordon for every gallon of water.
	Weedmaster (Premix of Banvel + 2,4-D)	2 qt.	Fair	For best results, apply to actively growing bindweed. Wheat injury may occur if the interval between application and planting is less than 10 days for each pint per acre used.	Generally not applied with a handgun.
	Roundup Landmaster BW	4 - 5 qt. 54 oz.	Good Good	Apply when bindweed is actively growing at the 6-inch to bud stage. For best results, apply only when growth is vigorous. The addition of 1 pint nonionic surfactant and 4 pounds of ammonium sulfate per 25 gallons of water may increase control.	For handgun spraying add 2.6 ounces Roundup and 1.3 ounces nonionic surfactant for every gallon of water. For handgun spraying add 1.3 ounces Landmaster BW for every gallon of water.
	Arsenal	1 - 2 pt.	Excellent	**For use on noncropland only**. Soil sterilant. For best results apply postemergence.	For handgun spraying add 0.66 ounce Arsenal plus 0.5 ounce nonionic surfactant for every gallon of water.
Nutsedge: Yellow Purple	Roundup	3 qt.	Poor	For best results apply when plants are in flower. Apply with 1 pint nonionic surfactant per 25 gallons of water. For best results use no more than 3 to 10 gallons of water per acre.	For handgun spraying add 2.6 ounces Roundup and 1.3 ounces nonionic surfactant for every gallon of water.
	Burndown products	Varies; see label.	Poor	Burndown products such as MSMA or paraquat will generally not give any long term control.	Generally not used with handgun application.
	Arsenal	2 - 3 pt.	Good	**For use on noncropland only**. Soil sterilant. **Currently not labeled**; however, TAES research has shown good control of yellow nutsedge with Arsenal. Use only if labeled weeds such as bindweed are present.	For handgun spraying add 0.66 ounce Arsenal plus 0.5 ounce nonionic surfactant for every gallon of water.

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